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EXAMINER	
RUSSELL, WANDA Z	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/689,400	ZUBERI, KHAWAR M.	
	Examiner	Art Unit	
	Wanda Z. Russell	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/20/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 4, 7, 8, 9, 12, 13, 14, 26, and 27 are objected to because of the following informalities: The term "variable rate data" should be "variable bit rate data (VBR)" which is used by the applicant in other claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Markaroff et al. (IEEE TRANSACTIONS ON SOFTWARE ENGINEERING, VOL. 27, NO. 1, JANUARY 2001), further in view of Khisti et al. (Pub No. US 2004/0174815).

For **claim 1**, Markaroff et al. teach in a requesting computer (Client –Fig. 2, and P. 14, left col., Sec. 2.1, 3rd para., first 2 lines) system (Fig. 2) that is network connectable (Fig. 2) along with one or more other computer systems to a network (Fig. 2, and P. 26, left col., Sec. 5.3, 2nd para. from the bottom, 3rd line from the end), a method for more accurately determining (P. 18, right col., Sec. 3.3, 1st para. lines 8-10) if the network has sufficient available resources to transfer a data stream, the method comprising:

an act of broadcasting (CmfsPrepare, P. 18, left col., Sec. 3.2.4, 2nd para., line 1, and lines 1-13) a start admission control (Abstract, line 5) message, the start admission

control message signaling to the other computer systems that an active probing experiment is to be conducted;

an act of conducting (vbrSim, P. 18,, right col., Sec. 3.3, 1st para., line 5, and lines 1-10) an active probing experiment to identify the available bandwidth of the network, the active probing experiment detecting (monitoring, P. 17, right col., Sec. 3.22, 2nd para., lines 2-3) network load caused by any other data stream and companion data stream being transferred from a transmitting computer system (Server-Fig. 2);

an act of determining (vbrSim, P. 18, right col., Sec. 3.3, 1st para., line 8, and 5-9) if the network has sufficient available bandwidth to transfer the data stream based on the results of the active probing experiment; and

an act of broadcasting (CmfsRead, P. 18, left col., Sec. 3.2.4, 2nd para., lines 6-7, and 1-10) an end admission control message, the end admission control message signaling to the other computer systems that the active probing experiment has completed.

However, Markaroff et al. fail to specifically teach the active probing.

Khisti et al. teach the active probing ([0031], last 2 liens).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for more active tests of data streams onto a network data path.

For **claim 2**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 1). However, Markaroff et al. fail to specifically teach the method as

recited in claim 1, wherein the act of conducting an active probing experiment to identify the available bandwidth of the network comprises performing promiscuous mode measurements.

Khisti et al. teach the method as recited in claim 1, wherein the act of conducting an active probing experiment to identify the available bandwidth of the network comprises performing promiscuous mode measurements ([0031], lines 6-7).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for more active testing.

For **claim 3**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 1). However, Markaroff et al. fail to specifically teach the method as recited in claim 1, wherein the act of conducting an active probing experiment to identify the available bandwidth of the network comprises performing a packet-pair test.

Khisti et al. teach the method as recited in claim 1, wherein the act of conducting an active probing experiment to identify the available bandwidth of the network comprises performing a packet-pair test ([0031], 2nd line from the end).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for more active testing.

For **claim 4**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 1). In addition, Markaroff et al. teach the method as recited in claim 1, wherein the act of conducting an active probing experiment to identify the available

bandwidth of the network comprises act of detecting (estimate, P. 23, left col., Sec. 5.2, 1st para., last line) network load caused by a companion stream (P. 23, left col., Sec. 5.2, 3rd para., lines 5-6) that corresponds to a variable rate stream being transferred on the network, the combined data transfer rate of the companion stream and the variable rate stream at least approximately the maximum data transfer rate of the variable rate stream (P. 23, left col., Sec. 5.2, 1st para.).

For **claim 5**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 1). In addition, Markaroff et al. teach the method as recited in claim 1, wherein the act of conducting an active probing experiment to identify the available bandwidth of the network comprises an act of conducting an abbreviated active probing experiment to validate an admission control cache entry (P. 16, right col., 2nd para., last 2 lines).

For **claim 6**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 1). However, Markaroff et al. fail to specifically teach the method as recited in claim 1, further comprising: an act of receiving (Abstract, 4th line from the end) an application request to admit the data stream onto the network at a specified data transfer rate prior to broadcasting the start admission control message.

Khisti et al. teach the method as recited in claim 1, further comprising:

an act of receiving (Abstract, 4th line from the end) an application request to admit the data stream onto the network at a specified data transfer rate prior to broadcasting the start admission control message (Abstract, last 5 lines).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for more active tests of data streams onto a network data path.

For **claim 7**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 1). In addition, Markaroff et al. teach the method as recited in claim 1, wherein the data stream is a variable rate data stream (P. 14, left col., Sec. 2.1, last para., 3rd line from the end).

For **claim 8**, Markaroff et al. teach in a transmitting computer (Server-Fig. 3) system (Fig. 3) that is network connectable (Fig. 2) along with one or more other computer systems to a network (Fig. 2, and P. 26, left col., Sec. 5.3, 2nd para. from the bottom, 3rd line form the end), the network transferring a variable rate data stream (VBR data, P. 13, right col., 1st para., line 17) that is being transmitted from the transmitting computer system, a method for more accurately representing the bandwidth that can be consumed by the variable rate data stream during an active probing experiment, the method comprising:

an act of identifying (the rate at which the client can handle, P. 16, left col., 2nd para., 3rd line from the end) a maximum data transfer rate for the variable rate data stream, the maximum data transfer rate representing the greatest data transfer rate at which the variable rate data stream is to be transmitted;

an act of transmitting (CmfsOpen, P. 17, Table 1, and right col., Sec. 3.23, 1st para., lines 2-4) the variable rate data stream at a data transfer rate less than the maximum data transfer rate;

an act of receiving (CmfsPrepare, P. 18, left col., Sec. 3.2.4, 2nd para., line 1, and lines 1-13) a start admission control message from a requesting computer system, the requesting computer system being a computer system that is to conduct active probing to determine (vbrSim, P. 18,, right col., Sec. 3.3, 1st para., line 8, and 5-9) if the network has sufficient bandwidth to transmit a new data stream from the requesting computer system; and

an act of transmitting (send, P. 16, left col., 2nd para., 3rd line from the end , and last 6 lines) a companion data stream along with the variable rate data stream in response to the start admission control message, the combined data transfer rate of the companion data stream and the variable rate data stream at least approximating the maximum data transfer rate.

However, Markaroff et al. fail to specifically teach the of active probing.

Khisti et al. teach the active probing ([0031], last 2 liens).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for more active tests of data streams onto a network data path.

For **claim 9**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 8). However, Markaroff et al. fail to specifically teach the method as

recited in claim 8, wherein the act of identifying a maximum data transfer rate for the variable rate data stream comprises an act of receiving an application request.

Khisti et al. teach the method as recited in claim 8, wherein the act of identifying a maximum data transfer rate for the variable rate data stream comprises an act of receiving an application request (Abstract, last 5 lines).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for more active tests of data streams onto a network data path.

For **claim 10**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 8). In addition, Markaroff et al. teach the method as recited in claim 8, where the act receiving a start admission control message from a requesting computer system, comprises an act of receiving a start admission control message from a requesting computer system that is validating an admission control cache entry (P. 16, right col., 2nd para., last 2 lines).

For **claim 11**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 8). In addition, Markaroff et al. teach the method recited in claim 8, further comprising:

an act of receiving (CmfsStop, P. 17, Table 1) an end admission control message from the requesting computer system; and

an act of terminating (CmfsClose, P. 17, Table 1) the companion data stream in response to the end admission control message.

For **claim 12**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 8). However, Markaroff et al. fail to specifically teach the method as recited in claim 8, wherein the variable rate data stream is an A/V data stream.

Khisti et al. teach the method as recited in claim 8, wherein the variable rate data stream is an A/V data stream ([0009], line 2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for A/V data streams.

For **claim 13**, Markaroff et al. teach in a transmitting computer (Server-Fig. 3) system (Fig. 3) that is network connectable (Fig. 2) along with one or more other computer systems to a network (Fig. 2, and P. 26, left col., Sec. 5.3, 2nd para. from the bottom, 3rd line form the end), the network transferring a variable bit rate data stream (VBR data, P. 13, right col., 1st para., line 17) that is being transmitted from the transmitting computer system, a method for more accurately representing the bandwidth that can be consumed by the variable bit rate data stream during an active probing experiment, the method comprising:

an act of identifying (the rate at which the client can handle, P. 16, left col., 2nd para., 3rd line from the end) a maximum data transfer rate for the variable rate data stream, the maximum data transfer rate representing the greatest data transfer rate at which the variable rate data stream is to be transmitted;

an act of transmitting (CmfsOpen, P. 17, Table 1, and right col., Sec. 3.23, 1st para., lines 2-4) the variable rate data stream at a data transfer rate less than the maximum data transfer rate; and

a step for temporarily simulating (P. 18, right col., Sec. 3.3, 1st para., line 3 and lines 1-5) that the variable rate stream is being transmitted at the maximum data transfer such that other computer systems performing active probing experiments generate more accurate results.

However, Markaroff et al. fail to specifically teach the active probing.

Khisti et al. teach the active probing ([0031], last 2 liens).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for more active tests of data streams onto a network data path.

For **claim 14**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 1). In addition, Markaroff et al. teach the method as recited in claim 13, wherein the step for a step for temporarily simulating that the variable rate stream is being transmitted at the maximum data transfer comprises:

a corresponding act of receiving (CmfsPrepare, P. 18, left col., Sec. 3.2.4, 2nd para., line 1, and lines 1-13) a start admission control message from a requesting computer system, the requesting computer system being a computer system that is to conduct active probing to determine (vbrSim, P. 18,, right col., Sec. 3.3, 1st para., line 8,

and lines 5-9) if the network has sufficient bandwidth to transmit a new data stream from the requesting computer system; and

a corresponding act of transmitting (send, P. 16, left col., 2nd para., 3rd line from the end , and last 6 lines) a companion data stream along with the variable rate data stream in response to the start admission control message, the combined data transfer rate of the companion data stream and the variable rate data stream at least approximating the maximum data transfer rate;

a corresponding act of receiving (CmfsStop, P. 17, Table 1) an end admission control message from the requesting computer system; and

a corresponding act of terminating (CmfsClose, P. 17, Table 1) the companion data stream in response to the end admission control message.

For claim 15, Markaroff et al. teach in a computer system (Fig. 2, and P. 26, left col., Sec. 5.3, 2nd para. from the bottom, 3rd line form the end) that is network connectable along with one or more other computer systems to a network, a method for efficiently and quickly performing admission control (Abstract, line 5), the method comprising:

an act of receiving (P. 16, right col., Sec. 3.1, 2nd para., line 6) an application request to admit a new data stream onto the network;

an act of referring (P. 16, right col., 2nd para., last 2 lines and 1-end) to an admission control cache, the admission control cache having an entry that corresponds to the new data stream and the current network configuration; and

an act of determining (CmfsPrepare, P. 18, left col., Sec. 3.2.4, 2nd para., line 1, and lines 1-13) if the data stream should be admitted onto the network based at least in part on rules contained in the entry such that the resources consumed to conduct admission control are significantly reduced.

However, Markaroff et al. fail to specifically teach an act of identifying the current network configuration of the network.

Khisti et al. teach

an act of identifying ([0072], lines 1-4) the current network configuration of the network.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Markaroff et al.] with [Khisti et al.] to obtain the invention as specified, for receiving more accurate network configuration information.

For **claim 16**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15). In addition, Markaroff et al. teach the method as recited in claim 15, wherein the act of identifying (the rate at which the client can handle, P. 16, left col., 2nd para., 3rd line from the end) the current network configuration of the network comprises an act of identifying the combined maximum data transfer rate of data streams being transferred on the network.

For **claim 17**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15). In addition, Markaroff et al. teach the method as recited in claim 15, wherein the act of referring to an admission control cache, comprises an act

of referring to an admission control cache at the computer system (P. 16, right col., 2nd para., last 2 lines).

For **claim 18**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15). In addition, Markaroff et al. teach the method as recited in claim 15, wherein the act of referring to an admission control cache, comprises an act of referring to an admission control cache at one of the one or more other computer systems (P. 16, right col., 2nd para., last 2 lines and Fig. 2).

For **claim 19**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15). In addition, Markaroff et al. teach the method recited in claim 15, wherein the act of referring to an admission control cache comprises an act of referring to an admission control cache entry that contains a previously generated indication indicating whether or not a data stream at least similar to the new data stream was admitted onto the network when the network had a network configuration similar to the current network configuration (P. 16, left col., Sec. 2.5, 2nd para., lines 3-6).

For **claim 20**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15). In addition, Markaroff et al. teach the method as recited in claim 15, wherein the act of determining (CmfsPrepare, P. 18, left col., Sec. 3.2.4, 2nd para., line 1, and lines 1-13) if the data stream should be admitted onto the network based at least in part on rules contained in the entry comprises an act of determining if the entry is committed.

For **claim 21**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15). In addition, Markaroff et al. teach the method as recited in

claim 15, wherein the act of determining if the data stream should be admitted onto the network based at least in part on rules contained in the entry comprises an act of referring to rules that indicate the new data stream is to be admitted to the network (P. 16, left col., Sec. 2.5, 2nd para., lines 3-6).

For **claim 22**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15, and 21). In addition, Markaroff et al. teach the method as recited in claim 21, further comprising:

an act of conducting an abbreviated active probing experiment to validate the entry (fast motion, P. 16, left col., Sec. 2.5, 2nd para., lines 7-8).

For **claim 23**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15, and 21). In addition, Markaroff et al. teach the method as recited in claim 15, wherein the act of determining if the data stream should be admitted onto the network based at least in part on rules contained in the entry comprises an act of referring to rules that indicate the new data stream is not to be admitted to the network (P. 16, left col., Sec. 2.5, 2nd para., lines 3-6).

For **claim 24**, Markaroff et al. and Khisti et al. teach everything claimed as applied above (see claim 15, and 21). In addition, Markaroff et al. teach the method as recited in claim 15, wherein the act of determining if the data stream should be admitted onto the network based at least in part on rules contained in the entry comprises:

an act of determining that the entry is to be validated (P. 16, left col., Sec. 2.5, 2nd para., lines 3-6); and

an act of performing an active probing experiment to validate the entry (P. 16, left col., Sec. 2.5, 2nd para., lines 3-6).

For **claims 25-26**, they are computer program product claims corresponding to method claim 1, therefore they are rejected for the same reason above.

For **claims 27-28**, they are computer program product claims corresponding to method claim 8, therefore they are rejected for the same reason above.

For claim 29, it is a computer program product claim corresponding to method claim 15, therefore it is rejected for the same reason above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Z. Russell whose telephone number is (571) 270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZR WZR

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